Does overall diet in midlife predict future aging phenotypes? A cohort study.

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Appendix-Table A: Factor loading† for high loading items (≥0.40)‡ on the two dietary patterns identified using principal component analysis at baseline.

	1st Pattern: "Healthy-foods"	2nd Pattern: "western-type"
Leafy vegetables	0.69	-
Other vegetables	0.67	-
Tomatoes	0.59	-
Salad dressing	0.50	-
Fruits	0.49	-
Fish	0.46	-
Cruciferous vegetables	0.44	-
Fried food	-	0.56
Processed meats	-	0.52
Quiche/Pie	-	0.47
Chocolate and sweets	-	0.46
Desserts/biscuits	-	0.45
Condiments	-	0.45
High fat dairy products	-	0.42
Refined grain	-	0.42
Red Meat	-	0.41

Two dietary patterns were identified using multiple criteria: the diagram of Eigen values, the Screeplot, the interpretability of the factors and the percentage of variance explained by the factors.

†Factor loadings represent the correlation between the food groups and the dietary pattern[12]

‡ Values < 0.30 were not listed in order to simplify interpretation of the factors

Appendix-Table B: Construction of AHEI scores in 5350 participants.

Components		Criteria for min. score	Criteria for max. score	Possible score range	AHEI scores in the participants *
					M ±SD
Vegetable (serving /day)		0	5	0-10	5.6 (2.9)
Fruit (serving /day)		0	4	0-10	5.9 (3.1)
Nuts and Soy (serving /day)		0	1	0-10	3.2 (3.0)
Ratio of white to red meat		0	4	0-10	5.1 (2.8)
**Total Fiber (% of energy)		0	24	0-10	7.6 (3.0)
Trans Fat (% of energy)		≥4	≤0.5	0-10	8.4 (2.7)
Ratio of PUFA to SFA		≤0.1	≥1	0-10	5.2 (2.7)
Duration of multivitamin Use		<5 year	≥5 year	2.5-7.5	4.2 (2.4)
Alcohol serving/day	Men:	0 or >3.5	1.5-2.5	0-10	4.7 (3.7) †
Alcohol serving/day	Women:	0 or >2.5	0.5-1.5	0-10	
Total Score				2.5-87.5	50.0 (12.0)

Abbreviation: AHEI, the alternative healthy eating index; PUFA, Polyunsaturated fatty acids; SAF, saturated fatty acids.

*Each AHEI component contributed from 0 to 10 points to the total AHEI score, except the multivitamin component which was dichotomous and contributing either 2.5 points (for non-use) or 7.5 points (for use) A score of 10 indicates that the recommendations were fully met, whereas a score of 0 represents the least healthy dietary behavior. Intermediate intakes were scored proportionately between 0 and 10.

**The original components of the index include cereal fiber, because cereal fiber was not available in our nutrient data set, we adapted the score by replacing it with total fiber.

† Mean score for men and women combined.

Appendix table C: Association between the two dietary patterns, AHEI scores and the four aging outcomes (n=5350).

Dietary pattern		Ideal Aging		Non Fatal CVD		Fatal CVD		Non CVD Death		
		OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI	P
"Healthy-foods" pattern										
Model 1	Tertile 1	1	reference	1	reference	1	reference	1	reference	
	Tertile 2	1.23	0.87-1.74	0.97	0.79-1.20	0.63	0.42-0.95	0.67	0.52-0.87	
	Tertile 3	1.16	0.80-1.69	1.06	0.86-1.32	0.67	0.44-1.02	0.73	0.56-0.96	
	Effect per 1SD	1.07	0.93-1.24	1.03	0.95-1.13	0.85	0.70-1.03	0.83	0.73-0.94	0.008
Model 2	Tertile 1	1	reference	1	reference	1	reference	1	reference	
	Tertile 2	1.23	0.87-1.74	0.97	0.79-1.20	0.63	0.42-0.95	0.67	0.52-0.87	
	Tertile 3	1.08	0.74-1.58	1.15	0.92-1.43	0.78	0.51-1.21	0.86	0.66-1.14	
	Effect per 1SD	1.04	0.90-1.21	1.06	0.97-1.16	0.93	0.77-1.13	0.90	0.80-1.02	0.19
"Western-type" pattern										
Model 1	Tertile 1	1	reference	1	reference	1	reference	1	reference	
	Tertile 2	0.92	0.65-1.30	0.85	0.68-1.06	1.36	0.87-2.12	0.88	0.66-1.17	
	Tertile 3	0.54	0.34-0.85	1.08	0.82-1.41	1.68	0.96-2.95	1.23	0.88-1.74	
	Effect per 1SD	0.77	.061-0.95	1.09	0.95-1.25	1.58	1.20-2.08	1.38	1.16-1.64	<10-4
Model 2	Tertile 1	1	reference	1	reference	1	reference	1	reference	
	Tertile 2	0.94	0.66-1.33	0.83	0.67-1.04	1.25	0.80-1.95	0.81	0.61-1.08	
	Tertile 3	0.58	0.36-0.94	1.02	0.78-1.34	1.40	0.80-2.47	0.96	0.68-1.35	
	Effect per 1SD	0.83	0.66-1.05	1.03	0.89-1.18	1.35	1.02-1.78	1.16	0.97-1.38	0.05
AHEI score"										
Model 1	Tertile 1	1	reference	1	reference	1	reference	1	reference	
	Tertile 2	1.52	1.07-2.16	0.85	0.69-1.04	0.48	0.32-0.72	0.67	0.52-0.86	
	Tertile 3	1.16	0.80-1.68	0.98	0.80-1.21	0.49	0.32-0.74	0.60	0.46-0.78	
	Effect per 1SD	1.09	0.95-1.27	0.97	0.89-1.06	0.70	0.59-0.83	0.75	0.67-0.83	<10-4
Model 2										
	Tertile 1	1	reference	1	reference	1	reference	1	reference	
	Tertile 2	1.41	0.99-2.01	0.90	0.73-1.10	0.54	0.35-0.81	0.76	0.59-0.98	
	Tertile 3	1.04	0.71-1.52	1.07	0.87-1.32	0.59	0.38-0.90	0.74	0.56-0.96	
	Effect per 1SD	1.04	0.90-1.21	1.01	0.93-1.11	0.77	0.65-0.92	0.83	0.74-0.92	0.006

AHEI: alternative Healthy Eating Index
Natural Aging was the "non-case" category for all aging phenotype outcomes presented

p for heterogeneity

Multinomial logistic regression to analyze associations between dietary patterns, AHEI score and the 5-category aging outcome: (1) ideal health, (2) non-fatal cardiovascular disease at follow-up, (3) cardiovascular death, (4) non-cardiovascular death, and (5) natural (or normal) aging (the non-case category for each of the other categories).

Model 1: Adjusted for age, sex and total energy intake
Model 2: As Model 1 + additionally adjusted for other heath behaviour: smoking habits and physical activity